



A.D. 1844 N° 10,254.

S P E C I F I C A T I O N

OF

WILLIAM BEDINGTON, JUNIOR.

—
FURNACES.
—

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
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1854.



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Furnaces.

BEDINGTON'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, WILLIAM BEDINGTON, junior, of Birmingham, in the County of Warwick, Manufacturer, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her
5 Letters Patent under the Great Seal of Great Britain, bearing date at
Westminster, the Tenth day of July, in the eighth year of Her reign, did,
for Herself, Her heirs and successors, give and grant unto me the said William
Bedington, Her especial licence, full power, sole privilege and authority,
that I, the said William Bedington, my exors, admors, and assigns, or such
10 others as I, the said William Bedington, my exors, admors, or assigns,
should at any time agree with, and no others, from time to time and at
all times during the term of years therein expressed, should and lawfully
might make, use, exercise, and vend, within England, Wales, and the Town
of Berwick upon Tweed, my Invention of "IMPROVEMENTS IN THE CONSTRUCTION
15 OF FURNACES;" in which said Letters Patent is contained a proviso that I, the
said William Bedington, shall cause a particular description of the nature of
my said Invention, and the manner in which the same is to be performed, to
be inrolled in Her said Majesty's High Court of Chancery within six calendar
months next and immediately after the date of the said in part recited Letters
20 Patent, as in and by the same, reference being thereunto had, will more fully
and at large appear.

Bedington's Improvements in the Construction of Furnaces.

NOW KNOW YE, that in compliance with the said proviso, I, the said William Bedington, do hereby declare that the nature of my said Invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, reference being had to the Drawing hereunto annexed, and to the figures and letters marked 5 thereon (that is to say) :—

The Invention consists of a mode of constructing furnaces so that the same may burn the fuel more advantageously, and the evolving of much dark dense smoke from the chimneys be prevented. And in order that the Invention may be most fully understood and readily carried into effect, I will proceed to 10 describe the Drawing hereunto annexed where a steam boiler furnace is shewn arranged according to my Invention.

DESCRIPTION OF THE DRAWING.

Figure 1 shews a section of a steam boiler furnace arranged according to my Invention. Figure 2 shews a section of another arrangement of furnace, 15 differing simply in the placing of the hanging bridge. *a* is the furnace, which is of an ordinary construction, and may be varied in size and also in arrangement without departing from the Invention. *b* is the ash-pit, at the back of which, and behind the bridge *c*, there is a chamber *d*, into which a supply of atmospheric air is kept up in order that the said air rising upwards may mix 20 with the products passing from the furnace and thus inflame them, there being suitable means for regulating the supply of air into the chamber *d*, which may be accomplished by a valve, as shown at *s*, or a slide, or other convenient means, so that the person attending the fire may prevent too much air passing into the chamber *d*, and yet that the supply shall be sufficient for causing the 25 products coming from the furnace to be inflamed; but having once regulated the size of the opening so that the furnace works well, I have not found it necessary afterwards to alter the opening for supplying of air. I would here remark, that I am aware that various means have before been resorted to for supplying atmospheric air at the back of the bridges of furnaces so as to 30 cause the products passing beyond the bridges to be inflamed, and I therefore do not claim the introduction of atmospheric air at the backs of bridges, nor the making a chamber *d* behind the bridge of a furnace, when separately considered, but *e* is a hanging bridge by which the products in their passages away are caused to be deflected, and this aids the mixing of the products 35 passing from the furnace with the atmospheric air rising out of the chamber *d*; and though with respect to the use of hanging bridges such as is shown at *e*, in Figures 1 and 2, I make no claim thereto in their separate form; as similar

FIG. 2.

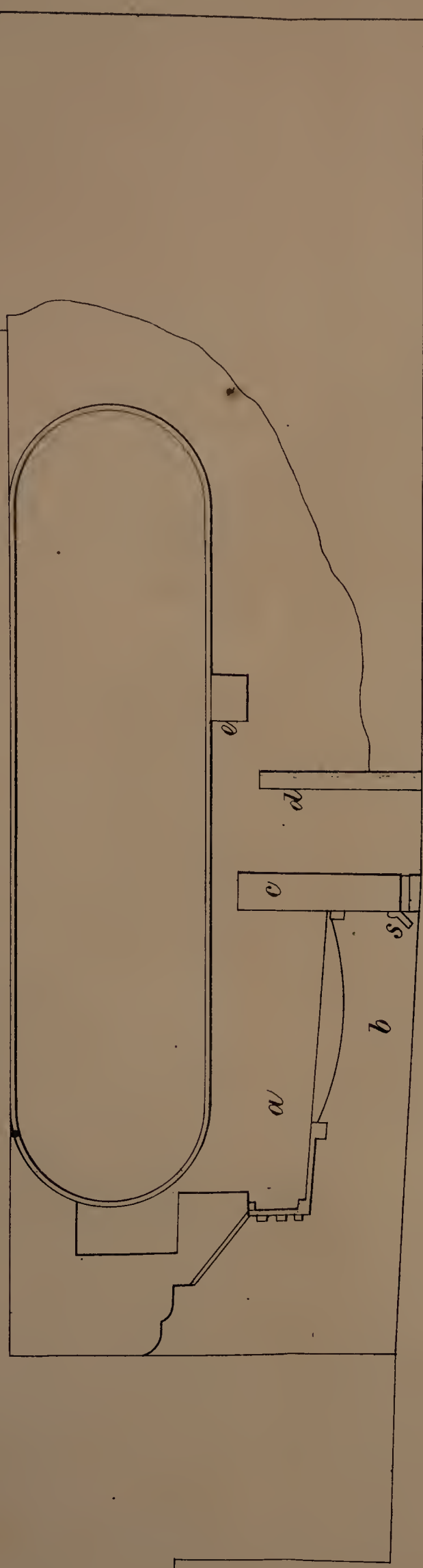
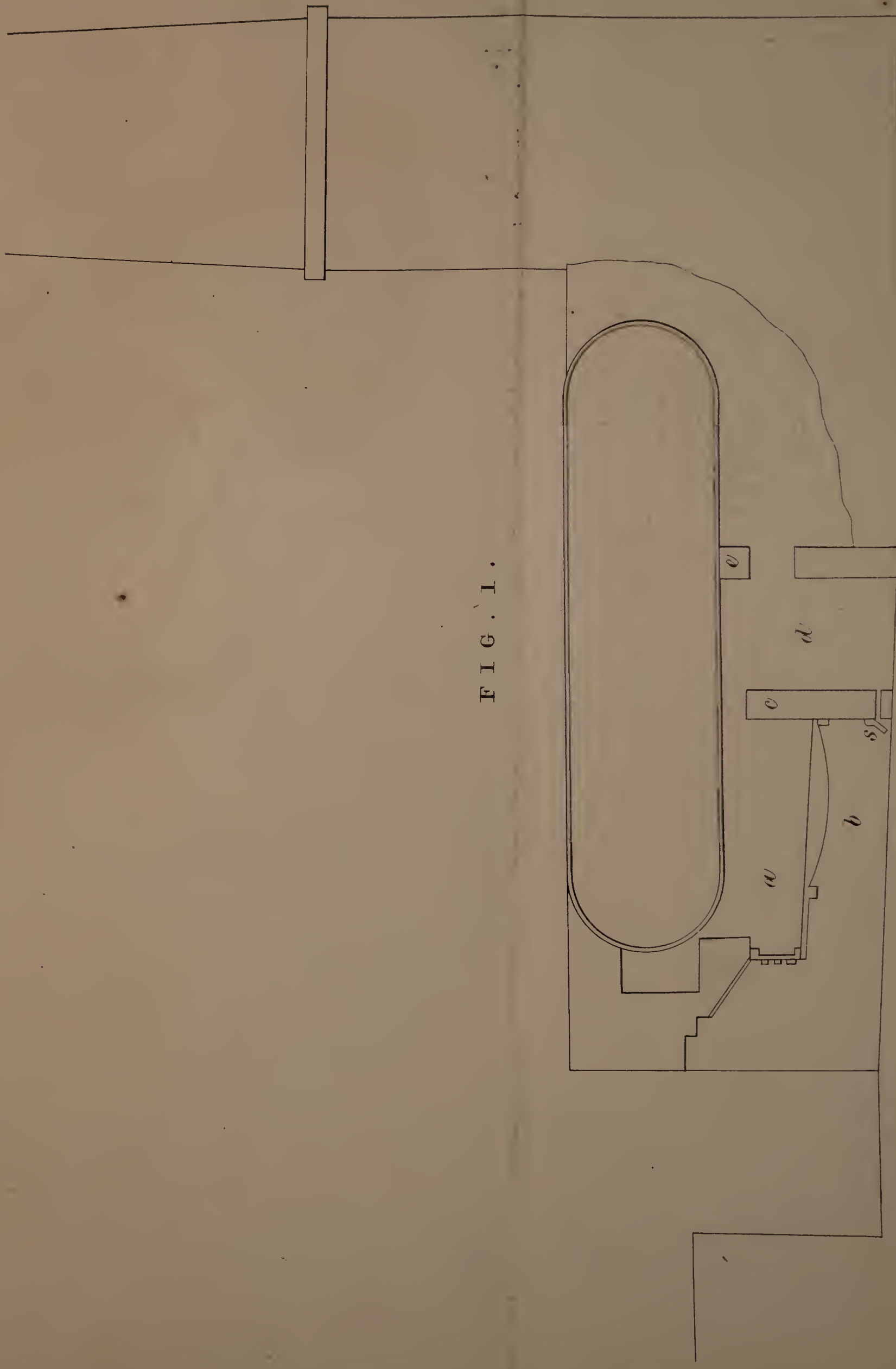


FIG. 1.



The Enrolled Drawing is partly colored.

Bedington's Improvements in the Construction of Furnaces.

hanging bridges have before been used, yet combined with the use of a chamber such as *d*, from which a supply of atmospheric air may be supplied to the passing products in order to their being inflamed, I consider these hanging bridges new. In Figure 1 the hanging bridge is placed over the chamber *d*, whilst that in Figure 2 is shewn just beyond the chamber *d*, and I have introduced these two arrangements in order to show that the position of the hanging bridge may be varied. And it will be evident that although I have only shewn a steam boiler furnace, other furnaces for other purposes will be readily made by a workman from the description herein given, he arranging chambers *d* at the back of the bridges *c*, and combining therewith the use of hanging bridges, as herein explained.

Having thus described the nature of my Invention, and the best means I am acquainted with for performing the same, I would have it understood that what I claim is the so constructing or arranging furnaces for steam boilers and other purposes, as to combine the use of chambers *d*, and hanging bridges *e* beyond the bridges *c*, as herein described.

In witness whereof, I, the said William Bedington, have hereunto set my hand and seal, this Seventh day of January, in the year of our Lord One thousand eight hundred and forty-five.

20 WILLIAM (L.S.) BEDINGTON, J^r.

AND BE IT REMEMBERED, that on the Seventh day of January in the year of our Lord 1845, the aforesaid William Bedington, came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Enrolled the Tenth day of January, in the year of our Lord One thousand eight hundred and forty-five.

LONDON :

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Printers to the Queen's most Excellent Majesty. 1854.

